Herculaneum Lead Smelter Site
351 Station Street
Herculaneum, MO 63048
Tel/Fax 636-475-3946

Facsimile Transmittal

To: Bruce Morrison Fax: 1-913-551-7063

From: Joanne Reno Date:

Re: [redacted] Pages: 8 11

CC: Roy E Taylor School

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ICMCS

Inspections Construction Management Consulting Services

Lead Dust Limited Inspection
Dunklin R-5 School District

Summary: Global Environmental, Inc. was retained by Ken R. Barker, Superintendent of Dunklin R-5 School District, to performed a limited study for possible exposure to lead dust at the four schools located in the district. The study was requested due to the close proximity of the Doe Run Co. to the school buildings.

Site #1 Roy E. Taylor Elementary 400 Joachim Ave. Herculaneum, MO 63048
Site #2 Herculaneum High School 500 Joachim Ave. Herculaneum, MO 63048
Site #3 Senn-Thomas Middle School 204 Main Street Herculaneum, MO 63048
Site #4 Pevely Primary School 300 County Rd. Pevely, MO 63070

Background: Doe Run Co. is a lead smeltering facility located appoximately 1/4 mile from two of the schools, Site #1 & Site #2. It was discovered that the hauling operations of the company had contaminated the streets with high levels of lead and cadmium. These streets are the main entry route into the Herculaneum area, which, buses and children must travel. Signs have been posted on the street near the schools warning of the high levels of contamination. Roy E. Taylor Elementary School has approximately 207 students (4th & 5th grade levels). Site #1 has two school buildings with construction prior to 1960. Herculaneum High School has approximately 564 students. Site #2 has 4 school buildings (listed as buildings A,B,C, & D). The oldest structure is Building A, which was built around 1947. Senn-Thomas Middle School has approximately 333 students. Site #3 has 2 school buildings. Building A was constructed in two phases. The original building was constructed in 1960 with an addition built in 1968. Pevely Primary has approimately 399 students and is located the farthest away from the smelter (approx. 2 miles north). Site #4 has 1 school building, 1 trailer and 1 bus garage. The original school building was constructed in 1949 with several additions added at later dates.

Sampling Strategies: A limited screening of painted surfaces was performed to identify any lead contaminate which maybe coming from within the buildings. The XRF used for detection of lead-based paint was a Niton XL-309 Spectrum Analyzer Lead Detector, serial number #U1807. It was manufactured by the Niton Corporation,

ICMCS, INC.
P.O. Box 4023
Florissant, MO 63032-4023

Office: 636-928-6599
Fax: 636-928-6667

900 Middlesex Turnpike, Building 8, Billerica, MA 01821. According to the HUD Guidelines, a lead reading by XRF of 1.0mg/cm2 or above is considered positive for the presence of lead-based paint.

Dust wipe samples and soil samples were collected and shipped to an accredited laboratory for analysis. Laboratory analysis was performed by hometest (METS Laboratories), 179 Smallwood Village Center Waldorf, MD 20602. AIHA Accreditation #102722. An accredited EPA NLLAP (National Lead Laboratory Accreditation) laboratory.

Overview:
Roy E. Taylor Elementary School: 11 out of 27 dust wipe samples were above the Federal lead guidelines used for clearances levels for floors, 40 ug/ft2. 5 of the 7 soil samples were above the Federal lead guidelines for lead in soil of 400 ppm in play areas. 129 painted surfaces were sampled with 7 identified as having lead-based paint.

Herculaneum High School: 26 out of 38 dust wipe samples were above the Federal lead guidelines used for clearances levels for floors, 40ug/ft2. 6 of the 7 soil samples were above the Federal lead guidelines for lead in soil of 400 ppm in play areas. 1 dust wipe sample was taken in the child development room with none detectable. 7 out of 7 dust wipe samples taken on the bleachers of the football field, showed levels above the Federal lead guidelines for clearance level on any horizontal surface. 157 painted surfaces were sampled with 16 identified as having lead-based paint.

Senn-Thomas Middle School: 9 out of 29 dust wipe samples were above the Federal lead guidelines used for clearance levels for floors, 40 ug/ft2. None of the 6 soil samples taken were above the Federal lead guidelines for lead in soil. 115 painted surfaces were tested with none identified as having lead-based paint.

Pevely Primary School: 9 out of 22 dust wipe samples were above the Federal lead guidelines used for clearance levels for floors, 40 ug/ft2. None of the 4 soil samples taken were above the Federal lead guidelines for lead in soil. 140 painted surfaces were tested with 10 identified as having lead-based paint.

Recommendations: Continuous education of personnel on the proper maintenance & housekeeping procedures required for the handling of lead dust. Cleaning of shelves, tops of file cabinets, window ledges and other horizontal surfaces were dust may settle needs to be address at least once a month.

All equipment with filtration media, should use High Efficiency Particulate Air Filters. Vacuums, shop vac's, air conditioners, heat registers etc.

Floors should be wet mopped or oil clothes used to collect dust. Door mats need to be hepa vacuumed or washed rather then swept.

Powerwash porches, handrails, driveways, walkways & playgrounds areas.

In short, very few of the components tested, either on the interior or exterior of the buildings, were found to contain lead-based paint. Lead dust was found to exist throughout the school buildings on horizontal surfaces. Soil samples were also found to contain various levels of lead contamination.

This report is a summary of the inspector's walk through and testing of materials and is not intended as specifications for abatement activities nor cleaning techniques. This report should not be considered a complete Lead-Based Paint inspection, only a limited screening for lead dust exposure.

Vicki J. Dunn - MO Lead Inspector #980826496625750

Patricia S. Briguglio - MO Lead Inspector #000616-1000001432

ICMCS

Inspections Construction Management Consulting Services

ROY E. TAYLOR ELEMENTARY SCHOOL
400 JOACHIM AVE.
HERCULANEUM, MISSOURI 63048

SITE VISIT & SAMPLING – Oct. 1, 2001

SITE 1A – 4TH. GRADE
Rooms 1 thru 6. Classrooms.
Room 7. Cafeteria.

SITE 1B – 5TH. GRADE
Rooms 1 thru 10. Classrooms.
Room 11 – Faculty Restroom.
Room 12 – Gym.
Room 13 – Faculty Lounge.
Room 14 – Boy's Restroom.
Room 15 – Counselor's.
Room 16 – Girl's Restroom.
Room 17 – Janitor's Closet.
Room 18 – Storage Room.

Did not access Room 10, Principal's Office or the Nurse's Office.

ICMCS INC
P.O. Box 4023
Florissant, MO 63032-4023
Office: 314-837-2948
Fax: 314-837-2948

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Analysis by METS Laboratories

Smallwood Village Center
[illegible], MD 20602
Toll Free 800.604.1995 Fax: 301.870.1701

Lead Dust Wipe Analysis Report

Report Number: 01100200117A
Received Date / Time: 10/02/2001 10:50:24 AM
Reported Date / Time: 10/02/2001 04:09:51 PM
Method: EPA SW846,7420

Mail Address:
[illegible] Barclay Herculaneum MO 63048

Client:
CMCS, Inc.
PO Box 4023
Florissant, MO 63031

AIHA Accreditation #: 102722

Account Number: [illegible]
Fax Number: 636/928-6667

Rebecca Taylor, QA/QC

Laboratory Results

METS Sample #	Client Sample ID / Collection Location	Surface	Collected Date / Analyzed Date	Total Pb µg	Area ft²	Pb µg/ft²	Narr. ID
1	RT-001 ENT. W. DOOR	CP	09/28/2001 10/02/2001	38.9	0.50	77.8	
2	RT-002 OTSDE ENT. W DR	FL	09/28/2001 10/02/2001	58.2	0.25	232.8	
3	RT-003 HALLWAY CAF. ENT. DR 7	FL	09/28/2001 10/02/2001	<10.0	0.50	Not Detectable	
4	RT-004 ENTRANCE	FL	09/28/2001 10/02/2001	<10.0	0.50	Not Detectable	
5	RT-005 VACUUM BAG CVR. INSD	NP	09/28/2001 10/02/2001	353.6	0.13	2828.4	
7	[illegible]	CP	[illegible]	[illegible]	[illegible]	[illegible]	
	[illegible]		[illegible]				

The Federal lead guidelines for leaded dust clearance levels by wipe sampling: Floors (FL) - 40 µg/ft², Interior Window Sills (SL) - 250 µg/ft², Window Wells (WW) - 400 µg/ft². The Reporting Limit (RL) is 10.0 µg/ft².

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79 Smallwood Village Center
Waldorf, MD 20602
Toll Free 800.604.1995 Fax: 301.870.1701

Lead Solid Analysis Report

Report Number: 01100200117B
Received Date / Time: 10/02/2001 10:50:24 AM
Reported Date / Time: 10/02/2001 04:26:27 PM
Method: EPA SW846,7420

Mailing Address:
9 Barclay Herculaneum MO 63048

Client:
CMCS, Inc.
PO Box 4023
Sortsant, MO 63031

Account Number: CMI50
Fax Number: 636/928-6667

M. Metzger
Marion Metzger, QA/QC

Laboratory Results

METS Sample #	Client Sample ID / Collection Location	Collected Date / Analyzed Date	Total Pb µg	Pb µg/g, ppm	% Pb by Wt.	Narr. ID
6	RT-006 VACUUM CLEANER	09/28/2001 10/02/2001	244.2	1340.75	0.1341	

The Method Detection Limit (MDL) is 5.0 µg Total Pb. The Reporting Limit (RL) is 10.0 µg Total Pb.

< means "less than"

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Analysis by METS Laboratories

179 Smallwood Village Center
Waldorf, MD 20602
Toll Free: 800.604.1995 Fax: 301.870.1701

Lead Dust Wipe Analysis Report

Test Address:
400 Joachim Herculaneum MO

Report Number: 01100300048A
Received Date / Time: 10/03/2001 10:28:45 AM
Reported Date / Time: 10/04/2001 08:54:42 AM
Method: EPA SW846,7420

Client:
Global Environmental Inc.
PMB #75
Saint Charles, MO 63303

AIHA Accreditation #: 102722

Account Number: GLOE50 *Fax Number:* 636/928-6667

Laboratory Results

Janet R. Chichester, QA/QC

METS Sample #	Client Sample ID / Collection Location	Surface	Collected Date / Analyzed Date	Total Pb µg	Area ft²	Pb µg/ft²	Narr. ID
1	RT-008 RM1 SHELF	NP	10/01/2001 10/03/2001	80.3	0.50	160.5	
2	RT-009 RM1 FLOOR	FL	10/01/2001 10/03/2001	<10.0	0.50	Not Detectable	
3	RT-010 CORRIDOR	NP	10/01/2001 10/03/2001	<10.0	0.50	Not Detectable	
4	RT-011 RM3 SL	SL	10/01/2001 10/03/2001	43.6	0.25	174.2	
5	RT-012 RM3 DESK	NP	10/01/2001 10/03/2001	13.6	0.50	27.2	
6	RT-013 CORRIDOR	FL	10/01/2001 10/03/2001	<10.0	0.50	Not Detectable	
7	RT-014 RM5	SL	10/01/2001 10/03/2001	30.0	0.25	119.8	
8	RT-015 RM5	FL	10/01/2001 10/03/2001	<10.0	0.50	Not Detectable	
9	RT-016 RM7 WALL	NP	10/01/2001 10/03/2001	29.2	1.00	29.2	
10	RT-017 RM7	FL	10/01/2001 10/03/2001	<10.0	0.50	Not Detectable	
11	RT-018 RM7 SHELF	NP	10/01/2001 10/03/2001	<10.0	0.25	Not Detectable	
12	RT-019 CORRIDOR E EXIT	FL	10/01/2001 10/03/2001	<10.0	0.50	Not Detectable	
13	RT-020 PORCH LEDGE	NP	10/01/2001 10/03/2001	741.4	0.25	2965.6	
14	RT-021 GYM	FL	10/01/2001 10/03/2001	<10.0	0.50	Not Detectable	
15	RT-022 WALL ENTRY	NP	10/01/2001 10/03/2001	24.2	0.50	48.3	

...ommended guidelines for lead dust clearance levels by wipe sampling, Floors (FL) - 40 µg/ft², Interior Window Sills (SL) - 250 µg/ft², Window Wells ... µg/ft². The Reporting Limit (RL) = 10.0 µg/...

1 of 2

"<" means "less than"

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179 Smallwood Village Center
Waldorf, MD 20602
Toll Free 800.604.1995 Fax: 301.870.1701

Lead Dust Wipe Analysis Report

Report Number: 01100300048A
Received Date / Time: 10/03/2001 10:28:45 AM
Reported Date / Time: 10/04/2001 08:54:42 AM
Method: EPA SW846,7420

Test Address:
86 Joachim Herculaneum MO

Client:
Global Environmental Inc.
PMB #75
Saint Charles, MO 63303

AIHA Accreditation #: 102722

Account Number: ROI 50 *Fax Number:* 636/928-6667

Janet R. Chichester, QA/QC

Laboratory Results

METS Sample #	Client Sample ID / Collection Location	Surface	Collected Date / Analyzed Date	Total Pb µg	Area ft²	Pb µg/ft²	Narr. ID
16	RT-023	SL	10/01/2001	39.1	0.25	156.4	
	RM7		10/03/2001				
17	RT-024	NP	10/01/2001	10.9	0.50	21.7	
	RM7 BOOKSHELF		10/03/2001				
18	RT-025	FL	10/01/2001	<10.0	0.50	Not Detectable	
	CORRIDOR		10/03/2001				
19	RT-026	NP	10/01/2001	83.6	0.25	334.2	
	FILE CAB COR		10/03/2001				
20	RT-027	NP	10/01/2001	21.3	0.25	85.2	
	RM4 AIR COND		10/03/2001				
21	RT-028	NP	10/01/2001	18.6	0.50	37.1	
	CORRIDOR NORTH		10/03/2001				

The [illegible] guidelines for leaded dust clearance levels by wipe sampling: Floors (FL) - 40 µg/ft², Interior Window Sills (SL) - 250 µg/ft², Window Wells [illegible] 400 µg/ft². The Reporting Limit (RL) is 10.0 µg/ft²

Page 2 of 2

< means "less than"

dw fix

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170 Smallwood Village Center
Waldorf, MD 20602
Toll Free: 800.604.1995 Fax: 301.870.1701

Lead in Soil Analysis Report

Test Address:
400 Joachim Herculaneum MO

Report Number:	01100300048D
Received Date / Time:	10/03/2001 10:28:45 AM
Reported Date / Time:	10/04/2001 12:03:40 PM
Method:	EPA SW846,7420

Client:
Global Environmental Inc.
PMB #75
Saint Charles, MO 63303

AIHA Accreditation #: 102722

Account Number: CLOE50
Fax Number: 636/928-6667

Maria P. Perez, QA/QC Supervisor

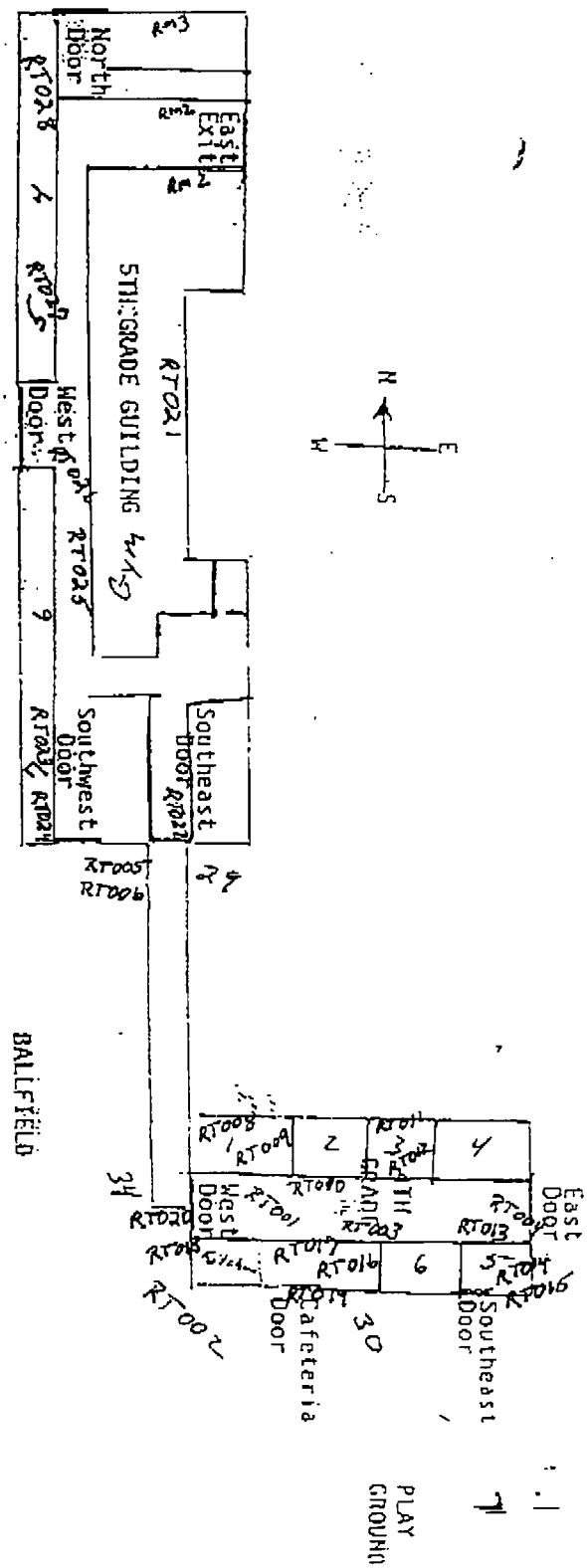
Laboratory Results

METS Sample #	Client Sample ID Collection Location	Collected Date Analyzed Date	Total Pb µg	Pb µg/g, ppm*	Narr. ID
22	RT-029 WALKWAY	10/01/2001 10/03/2001	203.7	164.3	
23	RT-030 PLAYGRND STAIRS CAFE	10/01/2001 10/03/2001	3560.0	3584.5	A
24	RT-031 BSKTBALL HOOP	10/01/2001 10/03/2001	1085.0	1011.4	
25	RT-032 PLAYGRND GRAVEL	10/01/2001 10/03/2001	89.8	76.6	
26	RT-033 BHD SWINGSET	10/01/2001 10/03/2001	631.8	606.1	
27	RT-034 BALLFIELD GOAL	10/01/2001 10/03/2001	446.5	414.0	
28	RT-035 BALLFIELD CENTR	10/01/2001 10/03/2001	529.2	530.2	

Sample Narratives:
A: Insufficient quantity of sample available for analysis. A minimum of 8.0 grams of soil must be submitted.

The [illegible] guidelines for lead in soil is 400 µg/g (ppm) in play areas, and 1200 µg/g (ppm) in bare soil in the remainder of the yard. The Reporting Limit (RL) is 100 µg/g (ppm).

* parts per million < means "less than"


UPPER PARKING LOT
North Door
East Exit
5TH GRADE GUILDING
West Door
Southwest Door
Southeast Door
BALLFIELD
East Door
West Door
Cafeteria Door
Southeast Door
PLAY GROUND
N
S
E
W